

application serial no. 60/105,234, filed October 21, 1998; and of U.S. provisional patent application serial no. 60/105,877, filed October 27, 1998, each of which applications are incorporated herein by reference.--

b) cont'd

Please insert the attached Page 638 into the specification after Page 637.

In the claims

Cancel claims 23, 32, 41, 50, 59, 68, 77, 86, 95, and 104 without prejudice to renewal.

Replace claims 22, 24-31, 33-40, 42-49, 51-58, 60-67, 69-76, 78-85, 87-94, 96-103 and 105-120 with the claims below. Claims amended herein are indicated in the text in parentheses.

82 22. (Amended) An isolated polynucleotide comprising at least 35 contiguous nucleotides of a nucleotide sequence selected from the group consisting of: SEQ ID NO:65, a degenerate variant of SEQ ID NO:65, and a complement of SEQ ID NO:65.

83 24. (Amended) An isolated antisense nucleic acid molecule comprising at least 35 contiguous nucleotides of the polynucleotide of claim 22.

25. A polynucleotide comprising the nucleotide sequence of an insert contained in a clone deposited as clone number M00001679D:D05 of ATCC Deposit Number 207068.

26. An isolated recombinant host cell containing the polynucleotide of claim 22.

27. An isolated vector comprising the polynucleotide of claim 22.

28. An isolated polypeptide encoded by the polynucleotide of claim 22.

29. A method for producing a polypeptide, the method comprising the steps of:
culturing a recombinant host cell containing the polynucleotide of claim 22 under conditions
suitable for the expression of an encoded polypeptide;
recovering the polypeptide from the host cell culture.

30. A method for detecting a gene product, wherein the gene product exhibits increased expression in a cancerous mammalian cell relative to a control cell, the method comprising the step of detecting a level of gene product expression in a test sample from a test mammalian cell, wherein the gene product is encoded by a polynucleotide comprising a sequence of the polynucleotide of claim 22; and

comparing the gene product expression level with an expression level of the gene product in a control sample from a control mammalian cell;

wherein detection of the gene product at a level that is increased in the test sample compared to the control sample cell indicates that the test cell is cancerous.

B4 31. (Amended) An isolated polynucleotide comprising at least 50 contiguous nucleotides of a nucleotide sequence selected from the group consisting of: SEQ ID NO:253, a degenerate variant of SEQ ID NO:253, and a complement of SEQ ID NO:253.

B5 33. (Amended) An isolated antisense nucleic acid molecule comprising at least 50 contiguous nucleotides of the polynucleotide of claim 31.

34. A polynucleotide comprising the nucleotide sequence of an insert contained in a clone deposited as clone number M00001448D:C09 of ATCC Deposit Number 207068.

35. An isolated recombinant host cell containing the polynucleotide of claim 31.

36. An isolated vector comprising the polynucleotide of claim 31.

37. An isolated polypeptide encoded by the polynucleotide of claim 31.

38. A method for producing a polypeptide, the method comprising the steps of: culturing a recombinant host cell containing the polynucleotide of claim 31 under conditions suitable for the expression of an encoded polypeptide; recovering the polypeptide from the host cell culture.

39. A method for detecting a gene product, wherein the gene product exhibits increased expression in a cancerous mammalian cell relative to a control cell, the method comprising the step of detecting a level of gene product expression in a test sample from a test mammalian cell, wherein the gene product is encoded by a polynucleotide comprising a sequence of the polynucleotide of claim 31; and

comparing the gene product expression level with an expression level of the gene product in a control sample from a control mammalian cell;

wherein detection of the gene product at a level that is increased in the test sample compared to the control sample cell indicates that the test cell is cancerous.

Bl4 40. (Amended) An isolated polynucleotide comprising at least 250 contiguous nucleotides of a nucleotide sequence selected from the group consisting of: SEQ ID NO:329, a degenerate variant of SEQ ID NO:329, and a complement of SEQ ID NO:329.

BT 42. (Amended) An isolated antisense nucleic acid molecule comprising at least 250 contiguous nucleotides of the polynucleotide of claim 40.

43. A polynucleotide comprising the nucleotide sequence of an insert contained in a clone deposited as clone number M00001616C:F07 of ATCC Deposit Number 207064.

44. An isolated recombinant host cell containing the polynucleotide of claim 40.

45. An isolated vector comprising the polynucleotide of claim 40.

46. An isolated polypeptide encoded by the polynucleotide of claim 40.

47. A method for producing a polypeptide, the method comprising the steps of:
culturing a recombinant host cell containing the polynucleotide of claim 40 under conditions suitable for the expression of an encoded polypeptide;
recovering the polypeptide from the host cell culture.

48. A method for detecting a gene product, wherein the gene product exhibits increased expression in a cancerous mammalian cell relative to a control cell, the method comprising the step of detecting a level of gene product expression in a test sample from a test mammalian cell, wherein the gene product is encoded by a polynucleotide comprising a sequence of the polynucleotide of claim 40; and

comparing the gene product expression level with an expression level of the gene product in a control sample from a control mammalian cell;

wherein detection of the gene product at a level that is increased in the test sample compared to the control sample cell indicates that the test cell is cancerous.

BB 49. (Amended) An isolated polynucleotide comprising at least 35 contiguous nucleotides of a nucleotide sequence selected from the group consisting of: SEQ ID NO:739, a degenerate variant of SEQ ID NO:739, and a complement of SEQ ID NO:739.

BB 51. (Amended) An isolated antisense nucleic acid molecule comprising at least 35 contiguous nucleotides of the polynucleotide of claim 49.

52. A polynucleotide comprising the nucleotide sequence of an insert contained in a clone deposited as clone number M00001460C:H02 of ATCC Deposit Number 207075.

53. An isolated recombinant host cell containing the polynucleotide of claim 49.

54. An isolated vector comprising the polynucleotide of claim 49.

55. An isolated polypeptide encoded by the polynucleotide of claim 49.

56. A method for producing a polypeptide, the method comprising the steps of:
culturing a recombinant host cell containing the polynucleotide of claim 49 under conditions suitable for the expression of an encoded polypeptide;
recovering the polypeptide from the host cell culture.

57. A method for detecting a gene product, wherein the gene product exhibits increased expression in a cancerous mammalian cell relative to a control cell, the method comprising the step of detecting a level of gene product expression in a test sample from a test mammalian cell, wherein the gene product is encoded by a polynucleotide comprising a sequence of the polynucleotide of claim 49; and

comparing the gene product expression level with an expression level of the gene product in a control sample from a control mammalian cell;

wherein detection of the gene product at a level that is increased in the test sample compared to the control sample cell indicates that the test cell is cancerous.

B10 58. (Amended) An isolated polynucleotide comprising at least 100 contiguous nucleotides of a nucleotide sequence selected from the group consisting of: SEQ ID NO:1186, a degenerate variant of SEQ ID NO:1186, and a complement of SEQ ID NO:1186.

B11 60. (Amended) An isolated antisense nucleic acid molecule comprising at least 100 contiguous nucleotides of the polynucleotide of claim 58.

61. A polynucleotide comprising the nucleotide sequence of an insert contained in a clone deposited as clone number M00001578C:G06 of ATCC Deposit Number 207065.

62. An isolated recombinant host cell containing the polynucleotide of claim 58.

63. An isolated vector comprising the polynucleotide of claim 58.

64. An isolated polypeptide encoded by the polynucleotide of claim 58.

65. A method for producing a polypeptide, the method comprising the steps of:
culturing a recombinant host cell containing the polynucleotide of claim 58 under conditions suitable for the expression of an encoded polypeptide;
recovering the polypeptide from the host cell culture.

66. A method for detecting a gene product, wherein the gene product exhibits increased expression in a cancerous mammalian cell relative to a control cell, the method comprising the step of detecting a level of gene product expression in a test sample from a test mammalian cell, wherein the gene product is encoded by a polynucleotide comprising a sequence of the polynucleotide of claim 58; and

comparing the gene product expression level with an expression level of the gene product in a control sample from a control mammalian cell;

wherein detection of the gene product at a level that is increased in the test sample compared to the control sample cell indicates that the test cell is cancerous.

b12

67. (Amended) An isolated polynucleotide comprising at least 20 contiguous nucleotides of a nucleotide sequence selected from the group consisting of: SEQ ID NO:1780, a degenerate variant of SEQ ID NO:1780, and a complement of SEQ ID NO:1780.

b13

69. (Amended) An isolated antisense nucleic acid molecule comprising at least 20 contiguous nucleotides of the polynucleotide of claim 67.

70. A polynucleotide comprising the nucleotide sequence of an insert contained in a clone deposited as clone number M00001450A:B03 of ATCC Deposit Number 207071.

71. An isolated recombinant host cell containing the polynucleotide of claim 67.

72. An isolated vector comprising the polynucleotide of claim 67.

73. An isolated polypeptide encoded by the polynucleotide of claim 67.

74. A method for producing a polypeptide, the method comprising the steps of:
culturing a recombinant host cell containing the polynucleotide of claim 67 under conditions suitable for the expression of an encoded polypeptide;
recovering the polypeptide from the host cell culture.

75. A method for detecting a gene product, wherein the gene product exhibits increased expression in a cancerous mammalian cell relative to a control cell, the method comprising the step of detecting a level of gene product expression in a test sample from a test mammalian cell, wherein the gene product is encoded by a polynucleotide comprising a sequence of the polynucleotide of claim 67; and

comparing the gene product expression level with an expression level of the gene product in a control sample from a control mammalian cell;

wherein detection of the gene product at a level that is increased in the test sample compared to the control sample cell indicates that the test cell is cancerous.

B14 76. (Amended) An isolated polynucleotide comprising at least 100 contiguous nucleotides of a nucleotide sequence selected from the group consisting of: SEQ ID NO:1899, a degenerate variant of SEQ ID NO:1899, and a complement of SEQ ID NO:1899.

B15 78. (Amended) An isolated antisense nucleic acid molecule comprising at least 100 contiguous nucleotides of the polynucleotide of claim 76.

79. A polynucleotide comprising the nucleotide sequence of an insert contained in a clone deposited as clone number M00001451B:F01 of ATCC Deposit Number 207071.

80. An isolated recombinant host cell containing the polynucleotide of claim 76.

81. An isolated vector comprising the polynucleotide of claim 76.

82. An isolated polypeptide encoded by the polynucleotide of claim 76.

83. A method for producing a polypeptide, the method comprising the steps of:
culturing a recombinant host cell containing the polynucleotide of claim 76 under conditions suitable for the expression of an encoded polypeptide;
recovering the polypeptide from the host cell culture.

84. A method for detecting a gene product, wherein the gene product exhibits increased expression in a cancerous mammalian cell relative to a control cell, the method comprising the step of detecting a level of gene product expression in a test sample from a test mammalian cell, wherein the gene product is encoded by a polynucleotide comprising a sequence of the polynucleotide of claim 76; and

comparing the gene product expression level with an expression level of the gene product in a control sample from a control mammalian cell;

wherein detection of the gene product at a level that is increased in the test sample compared to the control sample cell indicates that the test cell is cancerous.

B16

85. (Amended) An isolated polynucleotide comprising at least 100 contiguous nucleotides of a nucleotide sequence selected from the group consisting of: SEQ ID NO:1938, a degenerate variant of SEQ ID NO:1938, and a complement of SEQ ID NO:1938.

B17

87. (Amended) An isolated antisense nucleic acid molecule comprising at least 100 contiguous nucleotides of the polynucleotide of claim 85.

88. A polynucleotide comprising the nucleotide sequence of an insert contained in a clone deposited as clone number M00003879D:A08 of ATCC Deposit Number 207066.

89. An isolated recombinant host cell containing the polynucleotide of claim 85.

90. An isolated vector comprising the polynucleotide of claim 85.

91. An isolated polypeptide encoded by the polynucleotide of claim 85.

92. A method for producing a polypeptide, the method comprising the steps of:
culturing a recombinant host cell containing the polynucleotide of claim 85 under conditions suitable for the expression of an encoded polypeptide;
recovering the polypeptide from the host cell culture.

93. A method for detecting a gene product, wherein the gene product exhibits increased expression in a cancerous mammalian cell relative to a control cell, the method comprising the step of detecting a level of gene product expression in a test sample from a test mammalian cell, wherein the gene product is encoded by a polynucleotide comprising a sequence of the polynucleotide of claim 85; and

comparing the gene product expression level with an expression level of the gene product in a control sample from a control mammalian cell;

wherein detection of the gene product at a level that is increased in the test sample compared to the control sample cell indicates that the test cell is cancerous.

b18 94. (Amended) An isolated polynucleotide comprising at least 50 contiguous nucleotides of a nucleotide sequence selected from the group consisting of: SEQ ID NO:1998, a degenerate variant of SEQ ID NO:1998, and a complement of SEQ ID NO:1998.

b19 96. (Amended) An isolated antisense nucleic acid molecule comprising at least 50 contiguous nucleotides of the polynucleotide of claim 94.

97. A polynucleotide comprising the nucleotide sequence of an insert contained in a clone deposited as clone number M00001630D:H10 of ATCC Deposit Number 207065.

98. An isolated recombinant host cell containing the polynucleotide of claim 94.

99. An isolated vector comprising the polynucleotide of claim 94.

100. An isolated polypeptide encoded by the polynucleotide of claim 94.

101. A method for producing a polypeptide, the method comprising the steps of:
culturing a recombinant host cell containing the polynucleotide of claim 94 under conditions suitable for the expression of an encoded polypeptide;
recovering the polypeptide from the host cell culture.

102. A method for detecting a gene product, wherein the gene product exhibits increased expression in a cancerous mammalian cell relative to a control cell, the method comprising the step of detecting a level of gene product expression in a test sample from a test mammalian cell, wherein the gene product is encoded by a polynucleotide comprising a sequence of the polynucleotide of claim 94; and

comparing the gene product expression level with an expression level of the gene product in a control sample from a control mammalian cell;

wherein detection of the gene product at a level that is increased in the test sample compared to the control sample cell indicates that the test cell is cancerous.

b2D
103. (Amended) An isolated polynucleotide comprising at least 50 contiguous nucleotides of a nucleotide sequence selected from the group consisting of: SEQ ID NO:2007, a degenerate variant of SEQ ID NO:2007, and a complement of SEQ ID NO:2007.

b2
105. (Amended) An isolated antisense nucleic acid molecule comprising at least 50 contiguous nucleotides of the polynucleotide of claim 103.

106. A polynucleotide comprising the nucleotide sequence of an insert contained in a clone deposited as clone number M00001639A:C11 of ATCC Deposit Number 207065.

107. An isolated recombinant host cell containing the polynucleotide of claim 103.

108. An isolated vector comprising the polynucleotide of claim 103.

109. An isolated polypeptide encoded by the polynucleotide of claim 103.

110. A method for producing a polypeptide, the method comprising the steps of: culturing a recombinant host cell containing the polynucleotide of claim 103 under conditions suitable for the expression of an encoded polypeptide; recovering the polypeptide from the host cell culture.

111. A method for detecting a gene product, wherein the gene product exhibits increased expression in a cancerous mammalian cell relative to a control cell, the method comprising the step of detecting a level of gene product expression in a test sample from a test mammalian cell, wherein the gene product is encoded by a polynucleotide comprising a sequence of the polynucleotide of claim 103; and

comparing the gene product expression level with an expression level of the gene product in a control sample from a control mammalian cell;

wherein detection of the gene product at a level that is increased in the test sample compared to the control sample cell indicates that the test cell is cancerous.

Please add the following new claims.

b22
-- 112. (New) An isolated polynucleotide according to claim 22, wherein the polynucleotide is a cDNA.

113. (New) An isolated polynucleotide according to claim 31, wherein the polynucleotide is a cDNA.

114. (New) An isolated polynucleotide according to claim 40, wherein the polynucleotide is a cDNA.

115. (New) An isolated polynucleotide according to claim 49, wherein the polynucleotide is a cDNA.

116. (New) An isolated polynucleotide according to claim 58, wherein the polynucleotide is a cDNA.

117. (New) An isolated polynucleotide according to claim 67, wherein the polynucleotide is a cDNA.

118. (New) An isolated polynucleotide according to claim 76, wherein the polynucleotide is a cDNA.

b2
cDNA

119. (New) An isolated polynucleotide according to claim 85, wherein the polynucleotide is a cDNA.

120. (New) An isolated polynucleotide according to claim 94, wherein the polynucleotide is a cDNA.

121. (New) An isolated polynucleotide according to claim 103, wherein the polynucleotide is a cDNA.

122. (New) An isolated cDNA obtained by the process of amplification using a polynucleotide comprising at least 35 contiguous nucleotides of a nucleotide sequence of SEQ ID NO:65.

123. (New) An isolated cDNA obtained by the process of amplification using a polynucleotide comprising at least 50 contiguous nucleotides of a nucleotide sequence of SEQ ID NO:253.

124. (New) An isolated cDNA obtained by the process of amplification using a polynucleotide comprising at least 250 contiguous nucleotides of a nucleotide sequence of SEQ ID NO: 329.

125. (New) An isolated cDNA obtained by the process of amplification using a polynucleotide comprising at least 35 contiguous nucleotides of a nucleotide sequence of SEQ ID NO:739.

126. (New) An isolated cDNA obtained by the process of amplification using a polynucleotide comprising at least 100 contiguous nucleotides of a nucleotide sequence of SEQ ID NO: 1186.

127. (New) An isolated cDNA obtained by the process of amplification using a polynucleotide comprising at least 20 contiguous nucleotides of a nucleotide sequence of SEQ ID NO: 1780.

128. (New) An isolated cDNA obtained by the process of amplification using a polynucleotide comprising at least 100 contiguous nucleotides of a nucleotide sequence of SEQ ID NO: 1899.

129. (New) An isolated cDNA obtained by the process of amplification using a polynucleotide comprising at least 100 contiguous nucleotides of a nucleotide sequence of SEQ ID NO: 1938.

130. (New) An isolated cDNA obtained by the process of amplification using a polynucleotide comprising at least 50 contiguous nucleotides of a nucleotide sequence of SEQ ID NO: 1998.

*B22
CON WD*
131. (New) An isolated cDNA obtained by the process of amplification using a polynucleotide comprising at least 50 contiguous nucleotides of a nucleotide sequence of SEQ ID NO: 2007--

REMARKS UNDER 37 CFR § 1.111

Formal Matters

Claims 22, 24-31, 33-40, 42-49, 51-58, 60-67, 69-76, 68-85, 87-94, 96-103, 105-120 are pending after entry of the amendments above.

Claims 23, 32, 41, 50, 59, 68, 77, 86, 95, and 104 are canceled without prejudice to renewal, without acquiescing to any rejection that may have been applied to the claims, and without intent to abandon any subject matter encompassed by the canceled claims.

Claims 22, 24, 31, 33, 40, 42, 49, 51, 58, 60, 67, 69, 76, 78, 85, 87, 94, 96, 103 and 105 are amended to more distinctly claim the invention. Support for these amendments is found throughout the specification, particularly at: page 9, lines 6-10.

New claims 111-130 are added. Support for new claims 111-120 is found throughout the specification, particularly at: page 1, lines 3-8; page 5, line 5 through page 6, line 20; page 8, line 13 through page 9, line 27. Support for new claims 121-130 is found throughout the specification, particularly at: page 10, line 21 through page 14, line 22.

The first page of the specification has been amended to insert the priority claim as found on the filing receipt.

A replacement copy of Page 638 of the specification has been provided. The attached page simply correlates the clone names with the appropriate cDNA library.

A marked-up version of the changes made to the specification and claims by the current amendment is attached, and is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE."